1. An ultrasound medical treatment system comprising:

a) an ultrasound medical treatment transducer assembly having a longitudinal axis and having an ultrasound medical treatment transducer; and

b) a controller which rotationally controls the medical treatment transducer to emit ultrasound to thermally ablate patient tissue for a plurality of predetermined time intervals each associated with the medical treatment transducer rotationally disposed at a different one of an equal number of predetermined angular positions about the longitudinal axis, wherein a next-in-time time interval is associated with an angular position which is spatially non-adjacent to an angular position associated with a present-in-time time interval.

2. The ultrasound medical treatment system of claim 1, wherein each next-in-time time interval is associated with an angular position which is spatially non-adjacent to an angular position associated with a present-in-time time interval.

3. The ultrasound medical treatment system of claim 2, wherein each time interval is substantially identical, and wherein the angular distance between spatially adjacent angular positions is substantially identical.

4. The ultrasound medical treatment system of claim 3, wherein there are 18 angular positions, wherein the angular distance between spatially adjacent angular positions is substantially 20 degrees, wherein the first-in-time time interval is associated with a reference angular position of 0 degrees, and wherein sequentially-following-in-time time intervals are associated respectively with angular positions of 180, 80, 260, 140, 320, 40, 220, 100, 280, 160, 60, 240, 20, 300, 200, 120 and 340 degrees.

5. A method for medically treating patient tissue with ultrasound comprising the steps of:

a) obtaining an ultrasound medical treatment transducer assembly having a longitudinal axis and having an ultrasound medical treatment transducer; and

b) controlling the medical treatment transducer to emit ultrasound to thermally ablate the patient tissue for a plurality of predetermined time intervals each associated with the medical treatment transducer rotationally disposed at a different one of an equal number of predetermined angular positions about the longitudinal axis, wherein a next-in-time time interval is associated with an angular position which is spatially non-adjacent to an angular position associated with a present-in-time time interval.

6. The method of claim 5, wherein each next-in-time time interval is associated with an angular position which is spatially non-adjacent to an angular position associated with a present-in-time time interval.

7. The method of claim 6, wherein each time interval is substantially identical, and wherein the angular distance between spatially adjacent angular positions is substantially identical.

8. The method of claim 7, wherein there are 18 angular positions, wherein the angular distance between spatially adjacent angular positions is substantially 20 degrees, wherein the first-in-time time interval is associated with a reference angular position of 0 degrees, and wherein sequentially-following-in-time time intervals are associated respectively with angular positions of 180, 80, 260, 140, 320, 40, 220, 100, 280, 160, 60, 240, 20, 300, 200, 120 and 340 degrees.

9. An ultrasound medical treatment system comprising:

a) an ultrasound medical treatment transducer assembly having a longitudinal axis and having an ultrasound medical treatment transducer; and

b) a controller which translationally controls the medical treatment transducer to emit ultrasound to thermally ablate patient tissue for a plurality of predetermined time intervals each associated with the medical treatment

transducer translationally disposed at a different one of an equal number of predetermined translational positions along the longitudinal axis, wherein a next-in-time time interval is associated with a translational position which is spatially non-adjacent to a translational position associated with a present-in-time time interval.

10. The ultrasound medical treatment system of claim 9, wherein each next-in-time time interval is associated with a translational position which is spatially non-adjacent to a translational position associated with a present-in-time time interval.

11. The ultrasound medical treatment system of claim 10, wherein each time interval is substantially identical, and wherein the translational distance between spatially adjacent translational positions is substantially identical.

12. The ultrasound medical treatment system of claim 11, wherein there are 5 translational positions, wherein the translational distance between spatially adjacent translational positions is substantially 2 millimeters, wherein the first-in-time time interval is associated with a translational position of 1 millimeter from a reference translational position, and wherein sequentially-following-in-time time intervals are associated respectively with translational positions of 7, 3, 9 and 5 millimeters from the reference translational position.

13. A method for medically treating patient tissue with ultrasound comprising the steps of:

a) obtaining an ultrasound medical treatment transducer assembly having a longitudinal axis and having an ultrasound medical treatment transducer; and

b) controlling the medical treatment transducer to emit ultrasound to thermally ablate the patient tissue for a plurality of predetermined time intervals each associated with the medical treatment transducer translationally disposed at a different one of an equal number of predetermined translational positions

along the longitudinal axis, wherein a next-in-time time interval is associated with a translational position which is spatially non-adjacent to a translational position associated with a present-in-time time interval.

14. The method of claim 13, wherein each next-in-time time interval is associated with a translational position which is spatially non-adjacent to a translational position associated with a present-in-time time interval.

15. The method of claim 14, wherein each time interval is substantially identical, and wherein the translational distance between spatially adjacent translational positions is substantially identical.

16. The method of claim 15, wherein there are 5 translational positions, wherein the translational distance between spatially adjacent translational positions is substantially 2 millimeters, wherein the first-in-time time interval is associated with a translational position of 1 millimeter from a reference translational position, and wherein sequentially-following-in-time time intervals are associated respectively with translational positions of 7, 3, 9 and 5 millimeters from the reference translational position.

17. An ultrasound medical treatment system comprising:

a) an ultrasound medical treatment transducer; and

b) a controller which positionally controls the medical treatment transducer to emit ultrasound to thermally ablate patient tissue for a plurality of predetermined time intervals each associated with the medical treatment transducer positionally disposed at a different one of an equal number of predetermined positions, wherein a next-in-time time interval is associated with a position which is spatially non-adjacent to a position associated with a present-in-time time interval.

18. An ultrasound medical treatment system comprising:

a) an ultrasound medical treatment transducer assembly having a longitudinal axis and having an ultrasound medical treatment transducer; and

b) a controller which rotationally controls the medical treatment transducer to emit ultrasound to thermally ablate patient tissue for a predetermined time interval during which the medical treatment transducer is substantially-continuously rotated through an angular distance about the longitudinal axis.

19. The ultrasound medical treatment system of claim 18, wherein the medical treatment transducer is continuously rotated at a substantially constant angular speed.

20. The ultrasound medical treatment system of claim 18, wherein the angular distance is greater than 360 degrees.

21. The ultrasound medical treatment system of claim 20, wherein the angular distance is a multiple of 360 degrees.

22. The ultrasound medical treatment system of claim 18, wherein there the angular distance is less than 360 degrees

23. A method for medically treating patient tissue with ultrasound comprising the steps of:

a) obtaining an ultrasound medical treatment transducer assembly having a longitudinal axis and having an ultrasound medical treatment transducer; and

b) controlling the medical treatment transducer to emit ultrasound to thermally ablate the patient tissue for a predetermined time interval during which the medical treatment transducer is substantially-continuously rotated through an angular distance about the longitudinal axis.

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24. The method of claim 23, wherein the medical treatment transducer is continuously rotated at a substantially constant angular speed.

25. The method of claim 23, wherein the angular distance is greater than 360 degrees.

26. The method of claim 25, wherein the angular distance is a multiple of 360 degrees.

27. The method of claim 23, wherein there the angular distance is less than 360 degrees.

28. An ultrasound medical treatment system comprising:

a) an ultrasound medical treatment transducer assembly having a longitudinal axis and having an ultrasound medical treatment transducer; and

b) a controller which translationally controls the medical treatment transducer to emit ultrasound to thermally ablate patient tissue for a predetermined time interval during which the medical treatment transducer is substantially-continuously translated a translational distance along the longitudinal axis.

29. The ultrasound medical treatment system of claim 28, wherein the medical treatment transducer is continuously translated at a substantially constant translational speed.

30. A method for medically treating patient tissue with ultrasound comprising the steps of:

a) obtaining an ultrasound medical treatment transducer assembly having a longitudinal axis and having an ultrasound medical treatment transducer; and

b) controlling the medical treatment transducer to emit ultrasound to thermally ablate the patient tissue for a predetermined time interval during

which the medical treatment transducer is substantially-continuously translated a translational distance along the longitudinal axis.

31 The method of claim 30, wherein the medical treatment transducer is continuously translated at a substantially constant translational speed.

32. An ultrasound medical treatment system comprising:

a) an ultrasound medical treatment transducer; and

b) a controller which positionally controls the medical treatment transducer to emit ultrasound to thermally ablate patient tissue for a predetermined time interval during which the medical treatment transducer substantially-continuously changes position.

33. An ultrasound medical treatment system comprising:

a) an ultrasound medical treatment transducer having an array of ultrasound transducer elements and having a multiplicity of element groups each including at least one ultrasound transducer element of the array, wherein each ultrasound transducer element of the array belongs to only one element group; and

b) a controller which controls the medical treatment transducer to emit ultrasound to thermally ablate patient tissue for a plurality of predetermined time intervals each associated with emitting ultrasound from a different one of the element groups.

34. The ultrasound medical treatment system of claim 33, wherein each element group has an equal number of ultrasound transducer elements.

35. The ultrasound medical treatment system of claim 33, wherein the array is a linear array of ultrasound transducer elements, wherein all of the ultrasound transducer elements of an element group are adjacent at least one other ultrasound transducer element of that element group, and wherein all but two of the ultrasound transducer elements, for element groups having at least three

ultrasound transducer elements, are adjacent two other ultrasound transducer elements of that element group.

36. The ultrasound medical treatment system of claim 35, wherein each next-in-time time interval is associated with an element group which is spatially non-adjacent the element group associated with a present-in-time time interval.

37. The ultrasound medical treatment system of claim 35, wherein each next-in-time time interval is associated with an element group which is spatially adjacent the element group associated with a present-in-time time interval.

38. The ultrasound medical treatment system of claim 33, wherein the array is a linear array of ultrasound transducer elements, and wherein no ultrasound transducer element of an element group is adjacent any other ultrasound transducer element of that element group.

39. An ultrasound medical treatment system comprising:

a) an ultrasound medical treatment transducer having an array of ultrasound transducer elements, wherein the ultrasound transducer elements are disposed substantially along a straight or curved line; and

b) a controller which controls the medical treatment transducer to emit ultrasound to thermally ablate patient tissue by sequentially-in-time activating positionally-overlapping groups of sequential-in-position ultrasound transducer elements.

40. The ultrasound medical treatment system of claim 39, wherein the array includes sequential-in-position ultrasound transducer elements numbered 1, 2, 3, ... N, wherein the controller first only activates ultrasound transducer elements numbered 1 through 8, then only activates ultrasound transducer elements numbered 2 through 9, ..., and then only activates ultrasound transducer elements numbered N minus 7 through N.

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